

SEQUENCE LISTING

<110> Kosan Biosciences, Inc.
Santi, Daniel
Peck, Larry
Dayem, Linda
Kealey, James

<120> ISOLATED GENE FOR METHYLMALONYL COA EPIMERASE AND USES THEREOF

<130> 30062-20049.10

<140> To be Assigned

<141> Herewith

<150> US 09/699,136

<151> 2000-10-27

<150> US 60/161,414

<151> 1999-10-25

<150> US 60/161,703

<151> 1999-10-27

<150> US 60/206,082

<151> 2000-05-18

<160> 2

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 447

<212> DNA

<213> Artificial Sequence

<220>

<223> Isolated and recombinant form of the full
epimerase gene sequence

<221> CDS

<222> (1)...(444)

<400> 1

atg	agt	aat	gag	gat	ctt	ttc	atc	tgt	atc	gat	cac	gtg	gca	tat	gcg	48
Met	Ser	Asn	Glu	Asp	Leu	Phe	Ile	Cys	Ile	Asp	His	Val	Ala	Tyr	Ala	
1				5				10					15			

tgc	ccc	gac	gcc	gac	gag	gct	tcc	aag	tac	tac	cag	gag	acc	ttc	ggc	96
Cys	Pro	Asp	Ala	Asp	Glu	Ala	Ser	Lys	Tyr	Tyr	Gln	Glu	Thr	Phe	Gly	
			20					25				30				

tgg	cat	gag	ctc	cac	cgc	gag	gag	aac	ccg	gag	cag	gga	gtc	gtc	gag	144
Trp	His	Glu	Leu	His	Arg	Glu	Glu	Asn	Pro	Glu	Gln	Gly	Val	Val	Glu	
			35				40					45				

05220 2042450

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atc atg atg gcc ccg gct gcg aag ctg acc gag cac atg acc cag gtt      192
Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val
      50                      55                      60

cag gtc atg gcc ccg ctc aac gac gag tcg acc gtt gcc aag tgg ctt      240
Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu
      65                      70                      75                      80

gcc aag cac aat ggt cgc gcc gga ctg cac cac atg gca tgg cgt gtc      288
Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val
                      85                      90                      95

gat gac atc gac gcc gtc agc gcc acc ctg cgc gag cgc gcc gtg cag      336
Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln
                      100                      105                      110

ctg ctg tat gac gag ccc aag ctc ggc acc ggc gcc aac cgc atc aac      384
Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn
                      115                      120                      125

ttc atg cat ccc aag tcg ggc aag ggc gtg ctc atc gag ctc acc cag      432
Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln
                      130                      135                      140

tac ccg aag aac tga      447
Tyr Pro Lys Asn
145

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<210> 2

<211> 148

<212> PRT

<213> Artificial Sequence

<220>

<223> Deduced amino acid sequence of the epimerase gene
sequence

<400> 2

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Met Ser Asn Glu Asp Leu Phe Ile Cys Ile Asp His Val Ala Tyr Ala
 1          5          10          15
Cys Pro Asp Ala Asp Glu Ala Ser Lys Tyr Tyr Gln Glu Thr Phe Gly
          20          25          30
Trp His Glu Leu His Arg Glu Glu Asn Pro Glu Gln Gly Val Val Glu
          35          40          45
Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val
          50          55          60
Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu
          65          70          75          80
Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val
          85          90          95
Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln
          100          105          110
Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn
          115          120          125
Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln

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130
Tyr Pro Lys Asn
145

135

140

106220 2044660